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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,193	08/26/2003	Marilyn H. Perrin	SALK1740-10 (088802-3218)	5260

30542 7590 05/16/2007

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EXAMINER	
BORGEEST, CHRISTINA M	
ART UNIT	PAPER NUMBER
1649	

MAIL DATE	DELIVERY MODE
05/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/649,193	PERRIN ET AL.	
	Examiner	Art Unit	
	Christina Borgeest	1649	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 February 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,5-11,13,14 and 19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,5,6,8-11,13,14 and 19* is/are rejected.

7)☒ Claim(s) *7* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Formal Matters

The response filed 28 February 2007 is acknowledged. Claims 1 and 11 are amended. Claims 3-4, 12, 15-18 and 20 are cancelled. Claims 1-2, 5-11, 13-14 and 19 are under consideration.

The text of those sections of 35 U.S.C. not included in this action can be found in a prior office action mailed 1 May 2006.

Objections/Rejections Withdrawn

Priority

Applicant's claim for receiving the benefit of an earlier filing date under 35 U.S.C. [120] of 23 August 1993 was acknowledged but not granted by the Examiner, and the effective filing date determined by the Examiner was 12 November 1998, as set forth at p. 3 of the previous Office actions (mailed 1 May 2006 and 29 November 2006). Applicants have properly showed that they have support for the claimed subject matter in each of the parent applications dating back to 23 August 1993 at p. 8 of their arguments (see particularly the Table at p. 8 of their Arguments). Applicants have shown continuity via copendency in the chain of intervening applications and continuity of subject matter in the chain of intervening applications (MPEP 201.11), thus the priority date of 23 August 1993 is ***granted***.

Claim Rejections - 35 USC § 112, second paragraph

The rejection of claim 1, and claims 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, which depend from 1, under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention is withdrawn in response to Applicants' amendment of claims 1 and 11, cancellation claims 3-4 and upon reconsideration because previously granted U.S. patents 5,728,545 and 6,638,905 contain comparable language to the claims as currently recited.

Claim Rejections - 35 USC § 112, first paragraph

The rejection of claims 1-6, 8-11, 14-20 under 35 U.S.C. 112, first paragraph, for scope of enablement is withdrawn in response to Applicants amendment of claims 1 and 11, cancellation of claims 3-4, 12, 15-18 and 20 and upon reconsideration because previously granted U.S. patents 5,728,545 and 6,638,905 contain comparable language to the claims as currently recited.

Claim Rejections - 35 USC § 102

The rejection of claims 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19 and 20 under 35 U.S.C. 102(b) as being anticipated by Laurent et al. (FEBS, 1993; 335: 1-5) is withdrawn because of the cancellation of claims 3-4, 12, 15-18 and 20 and because a priority date of 23 August 1993 was granted and the publication by Laurent et al. no longer qualifies as prior art.

The rejection of claims 1, 8 13 and 14 under 35 U.S.C. 102(b) as being anticipated by Chen et al. (Proc Natl Acad Sci. 1993; 90: 8967-8971—on IDS filed 12 November 2003) is withdrawn because a priority date of 23 August 1993 was granted and the publication by Chen et al. no longer qualifies as prior art.

Double Patenting

The rejection of claims 1-11 and 13-20 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 5,728,545 (the '545 patent) is withdrawn in response to Applicants cancellation of claims 3-4, 12, 15-18 and 20 and because a restriction requirement between the DNA and protein was made, thus the rejection over the '545 patent is not proper.

Rejection Maintained/New Rejection/Objection

Claim Objections

Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 112, first paragraph

The rejection of claim 13 for scope of enablement as set forth in the previous Office actions (mailed 1 May 2006 and 29 November 2006) is maintained for reasons of record and the following. Claim 13 recites "[a] pure polypeptide comprising at least 15 contiguous amino acids of the amino acid sequence set forth in SEQ ID NO: 15, wherein said polypeptide is about 70% pure (by weight of total proteins). The claim requires only 15 contiguous amino acids without any functional requirement, thus it would require undue experimentation on the part of the person of ordinary skill in the art to use the polypeptides encompassed by the claim. Rijkers et al. (ChemBioChem 2004; 5: 340-348) teach a number of inactive fragments of astressin that do not have biological activity (see Table I, p. 342-343 and p. 343, left column, 1st paragraph). Although not the same protein as recited in claim 13; astressin is a CRF receptor antagonist, and the principle is the same; namely that certain residues must be preserved in order to preserve structure-activity relationships. The problem of predicting protein structure from sequence data and in turn utilizing predicted structural determinations to ascertain functional aspects of the protein is extremely complex. Certain positions in the sequence are critical to the protein's structure/function relationship, e.g. such as various sites or regions directly involved in binding, activity and in providing the correct three-dimensional spatial orientation of binding and active sites. These or other regions may also be critical determinants of antigenicity. These regions can tolerate only relatively conservative substitutions or no substitutions (see Wells, 1990, Biochemistry 29:8509-8517; Ngo et al., 1994, The Protein Folding Problem

and Tertiary Structure Prediction, pp. 492-495). However, Applicant has provided little or no guidance beyond the mere presentation of sequence data to enable one of ordinary skill in the art to determine, without undue experimentation, which fragments of SEQ ID NO: 15 have functional activity. Although the specification outlines art-recognized procedures for producing and screening for active fragments, this is not adequate guidance, but is merely an invitation to the artisan to use the current invention as a starting point for further experimentation. Even if an active or binding site were identified in the specification, they may not be sufficient, as the ordinary artisan would immediately recognize that an active or binding site must assume the proper three-dimensional configuration to be active, which conformation is dependent upon surrounding residues; therefore substitution of non-essential residues can often destroy activity. The art recognizes that function cannot be predicted from structure alone (Bork, 2000, Genome Research 10:398-400; Skolnick et al., 2000, Trends in Biotech. 18(1):34-39, especially p. 36 at Box 2; Doerks et al., 1998, Trends in Genetics 14:248-250; Smith et al., 1997, Nature Biotechnology 15:1222-1223; Brenner, 1999, Trends in Genetics 15:132-133; Bork et al., 1996, Trends in Genetics 12:425-427).

Due to the large quantity of experimentation necessary to generate the large number of fragments recited in the claims and screen same for activity, the lack of direction/guidance presented in the specification regarding which structural features are required in order to provide activity, the absence of working examples directed to same, the complex nature of the invention, the state of the prior art which establishes the unpredictability of the effects of mutation on protein structure and function, and the

breadth of the claims which fail to recite any structural or functional limitations, undue experimentation would be required of the skilled artisan to make and/or use the claimed invention in its full scope.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-2, 5-6, 8-11, 13-14 and 19 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-23 of U.S. Patent No. 6,638,905 (the '905 patent). Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims as broadly recited, encompass the G protein-coupled corticotropin-releasing factor (CRF) receptor protein of the '905 patent. For example, instant claims 1, 11 (and their dependent

claims) recite the CRF receptor protein in terms of a protein that is encoded by DNA that hybridizes to the complement of the polynucleotide sequence set forth in SEQ ID NO: 14...so as to allow identification of sequences having at least 70% nucleic acid identity with respect to SEQ ID NO: 14", and SEQ ID NO: 1 of the '905 patent has greater than 70% identity with SEQ ID NO: 14 of the instant application. For evidence of this see SCORE results reproduced below:

```
RESULT 8
AR412100
LOCUS       AR412100                1495 bp    DNA     linear   PAT 18-DEC-2003
DEFINITION  Sequence 1 from patent US 6638905.
ACCESSION   AR412100
VERSION     AR412100.1  GI:40164659
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 1495)
  AUTHORS   Perrin,M.H., Chen,R., Lewis,K.A., Vale,W.W. Jr., Donaldson,C.J. and
            Sawchenko,P.
  TITLE     Cloning and recombinant production of CFR receptor(s)
  JOURNAL   Patent: US 6638905-A 1 28-OCT-2003;
            The Salk Institute for Biological Studies; La Jolla, CA
FEATURES             Location/Qualifiers
     source          1..1495
                     /organism="unknown"
                     /mol_type="genomic DNA"
ORIGIN

  Query Match             88.4%;  Score 1398;  DB 6;  Length 1495;
  Best Local Similarity   94.5%;  Pred. No. 1e-252;
  Matches 1495;  Conservative    0;  Mismatches    0;  Indels   87;  Gaps    1;

Qy          1 CGAGCCCGCAGCCGCCCGCCGGTTCCTCTGGGATGTCCGTAGGACCCGGGCATTCAGGAC 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 CGAGCCCGCAGCCGCCCGCCGGTTCCTCTGGGATGTCCGTAGGACCCGGGCATTCAGGAC 60

Qy         61 GGTAGCCGAGCGAGCCCGAGGATGGGAGGGCACCCGCAGCTCCGTCTCGTCAAGGCCCTT 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GGTAGCCGAGCGAGCCCGAGGATGGGAGGGCACCCGCAGCTCCGTCTCGTCAAGGCCCTT 120

Qy        121 CTCCTTCTGGGGCTGAACCCCGTCTCTGCCTCCCTCCAGGACCAGCACTGCGAGAGCCTG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 CTCCTTCTGGGGCTGAACCCCGTCTCTGCCTCCCTCCAGGACCAGCACTGCGAGAGCCTG 180

Qy        181 TCCCTGGCCAGCAACATCTCAGGACTGCAGTGCAACGCATCCGTGGACCTCATTGGCACC 240
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                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 TCCCTGGCCAGCAACATCTCAGGACTGCAGTGCAACGCATCCGTGGACCTCATTGGCACC 240

Qy        241 TGCTGGCCCCCGCAGCCCTGCGGGGCAGCTAGTGGTTCGGCCCTGCCCTGCCTTTTTCTAT 300
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TGCTGGCCCCCGCAGCCCTGCGGGGCAGCTAGTGGTTCGGCCCTGCCCTGCCTTTTTCTAT 300

Qy        301 GGTGTCCGCTACAATACCACAAACAATGGCTACCGGGAGTGCCTGGCCAATGGCAGCTGG 360
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 GGTGTCCGCTACAATACCACAAACAATGGCTACCGGGAGTGCCTGGCCAATGGCAGCTGG 360

Qy        361 GCCGCCCGCGTGAATTACTCCGAGTGCCAGGAGATCCTCAATGAGGAGAAAAAAAGCAAG 420
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 GCCGCCCGCGTGAATTACTCCGAGTGCCAGGAGATCCTCAATGAGGAGAAAAAAAGCAAG 420

Qy        421 GTGCACTACCATGTCGCAGTCATCATCAACTACCTGGGCCACTGTATCTCCCTGGTGGCC 480
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Qy        481 CTCCTGGTGGCCTTTGTCCTCTTTCTGCGGCTCAGGCCAGGCTGCACCCATTGGGGTGAC 540
                |||||||||||||||||||||||||||||||
Db        481 CTCCTGGTGGCCTTTGTCCTCTTTCTGCGGCTC--------------------------- 513

Qy        541 CAGGCAGATGGAGCCCTGGAGGTGGGGGCTCCATGGAGTGGTGCCCCATTTCAGGTTCGA 600

Db        514 ------------------------------------------------------------ 513

Qy        601 AGGAGCATCCGGTGCCTGCGAAACATCATCCACTGGAACCTCATCTCCGCCTTCATCCTG 660
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        514 AGGAGCATCCGGTGCCTGCGAAACATCATCCACTGGAACCTCATCTCCGCCTTCATCCTG 573

Qy        661 CGCAACGCCACCTGGTTCGTGGTCCAGCTAACCATGAGCCCCGAGGTCCACCAGAGCAAC 720
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        574 CGCAACGCCACCTGGTTCGTGGTCCAGCTAACCATGAGCCCCGAGGTCCACCAGAGCAAC 633

Qy        721 GTGGGCTGGTGCAGGTTGGTGACAGCCGCCTACAACTACTTCCATGTGACCAACTTCTTC 780
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        634 GTGGGCTGGTGCAGGTTGGTGACAGCCGCCTACAACTACTTCCATGTGACCAACTTCTTC 693

Qy        781 TGGATGTTCGGCGAGGGCTGCTACCTGCACACAGCCATCGTGCTCACCTACTCCACTGAC 840
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        694 TGGATGTTCGGCGAGGGCTGCTACCTGCACACAGCCATCGTGCTCACCTACTCCACTGAC 753

Qy        841 CGGCTGCGCAAATGGATGTTCATCTGCATTGGCTGGGGTGTGCCCTTCCCCATCATTGTG 900
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        754 CGGCTGCGCAAATGGATGTTCATCTGCATTGGCTGGGGTGTGCCCTTCCCCATCATTGTG 813

Qy        901 GCCTGGGCCATTGGGAAGCTGTACTACGACAATGAGAAGTGCTGGTTTGGCAAAAGGCCT 960
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        814 GCCTGGGCCATTGGGAAGCTGTACTACGACAATGAGAAGTGCTGGTTTGGCAAAAGGCCT 873

Qy        961 GGGGTGTACACCGACTACATCTACCAGGGCCCCATGATCCTGGTCCTGCTGATCAATTTC 1020
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        874 GGGGTGTACACCGACTACATCTACCAGGGCCCCATGATCCTGGTCCTGCTGATCAATTTC 933
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Qy       1021 ATCTTCCTTTTCAACATCGTCCGCATCCTCATGACCAAGCTCCGGGCATCCACCACGTCT 1080
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        934 ATCTTCCTTTTCAACATCGTCCGCATCCTCATGACCAAGCTCCGGGCATCCACCACGTCT 993

Qy       1081 GAGACCATTCAGTACAGGAAGGCTGTGAAAGCCACTCTGGTGCTGCTGCCCCTCCTGGGC 1140
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        994 GAGACCATTCAGTACAGGAAGGCTGTGAAAGCCACTCTGGTGCTGCTGCCCCTCCTGGGC 1053

Qy       1141 ATCACCTACATGCTGTTCTTCGTCAATCCCGGGGAGGATGAGGTCTCCCGGGTCGTCTTC 1200
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1054 ATCACCTACATGCTGTTCTTCGTCAATCCCGGGGAGGATGAGGTCTCCCGGGTCGTCTTC 1113

Qy       1201 ATCTACTTCAACTCCTTCCTGGAATCCTTCCAGGGCTTCTTTGTGTCTGTGTTCTACTGT 1260
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1114 ATCTACTTCAACTCCTTCCTGGAATCCTTCCAGGGCTTCTTTGTGTCTGTGTTCTACTGT 1173

Qy       1261 TTCCTCAATAGTGAGGTCCGTTCTGCCATCCGGAAGAGGTGGCACCGGTGGCAGGACAAG 1320
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1174 TTCCTCAATAGTGAGGTCCGTTCTGCCATCCGGAAGAGGTGGCACCGGTGGCAGGACAAG 1233

Qy       1321 CACTCGATCCGTGCCCGAGTGGCCCGTGCCATGTCCATCCCCACCTCCCCAACCCGTGTC 1380
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1234 CACTCGATCCGTGCCCGAGTGGCCCGTGCCATGTCCATCCCCACCTCCCCAACCCGTGTC 1293

Qy       1381 AGCTTTCACAGCATCAAGCAGTCCACAGCAGTCTGAGCTGGCAGGTCATGGAGCAGCCCC 1440
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1294 AGCTTTCACAGCATCAAGCAGTCCACAGCAGTCTGAGCTGGCAGGTCATGGAGCAGCCCC 1353

Qy       1441 CAAAGAGCTGTGGCTGGGGGGATGACGGCCAGGCTCCCTGACCACCCTGCCTGTGGAGGT 1500
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1354 CAAAGAGCTGTGGCTGGGGGGATGACGGCCAGGCTCCCTGACCACCCTGCCTGTGGAGGT 1413

Qy       1501 GACCTGTTAGGTCTCATGCCCACTCCCCCAGGAGCAGCTGGCACTGACAGCCTGGGGGGG 1560
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1414 GACCTGTTAGGTCTCATGCCCACTCCCCCAGGAGCAGCTGGCACTGACAGCCTGGGGGGG 1473

Qy       1561 CCGCTCTCCCCCTGCAGCCGTG 1582
             |||||||||||||||||||||||
Db       1474 CCGCTCTCCCCCTGCAGCCGTG 1495
```

In addition, the CRF receptor protein recited in the claims of the '905 patent has greater than 70% identity with SEQ ID NO: 15. For evidence of this see SCORE results reproduced below

```
RESULT 8
US-09-191-724-1
; Sequence 1, Application US/09191724
; Patent No. 6638905
```

```
; GENERAL INFORMATION:
;  APPLICANT: Perrin, Marilyn H.
;  APPLICANT: Chen, Ruoping
;  APPLICANT: Lewis, Kathy A.
;  APPLICANT: Vale Jr., Wylie W.
;  APPLICANT: Donaldson, Cynthia J.
;  APPLICANT: Sawchenko, Paul
;  TITLE OF INVENTION: Cloning and Recombinant Production of
;  TITLE OF INVENTION: CRF Receptor(s)
;  FILE REFERENCE: Salk1748
;  CURRENT APPLICATION NUMBER: US/09/191,724
;  CURRENT FILING DATE: 1998-11-12
;  EARLIER APPLICATION NUMBER: US 08/374,009
;  EARLIER FILING DATE: 1995-01-17
;  EARLIER APPLICATION NUMBER: US 08/353,537
;  EARLIER FILING DATE: 1994-12-09
;  EARLIER APPLICATION NUMBER: PCT/US94/05908
;  EARLIER FILING DATE: 1993-05-25
;  EARLIER APPLICATION NUMBER: US 08/110,286
;  EARLIER FILING DATE: 1993-08-23
;  EARLIER APPLICATION NUMBER: US 08/079,320
;  EARLIER FILING DATE: 1993-06-18
;  NUMBER OF SEQ ID NOS: 15
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 1
;   LENGTH: 1495
;   TYPE: DNA
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: CDS
;   LOCATION: (82)...(1326)
;   OTHER INFORMATION: /product = "Human pituitary CRF-receptor"
;   OTHER INFORMATION: /note= "This sequence is encoded by clone
;   OTHER INFORMATION: "CRF-R1"."
US-09-191-724-1

  Query Match             88.4%;  Score 1398;  DB 3;  Length 1495;
  Best Local Similarity   94.5%;  Pred. No. 0;
  Matches 1495;  Conservative    0;  Mismatches    0;  Indels   87;  Gaps
1;

Qy          1 CGAGCCCGCAGCCGCCCGCCGGTTCCTCTGGGATGTCCGTAGGACCCGGGCATTCAGGAC 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 CGAGCCCGCAGCCGCCCGCCGGTTCCTCTGGGATGTCCGTAGGACCCGGGCATTCAGGAC 60

Qy         61 GGTAGCCGAGCGAGCCCGAGGATGGGAGGGCACCCGCAGCTCCGTCTCGTCAAGGCCCTT 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GGTAGCCGAGCGAGCCCGAGGATGGGAGGGCACCCGCAGCTCCGTCTCGTCAAGGCCCTT 120

Qy        121 CTCCTTCTGGGGCTGAACCCCGTCTCTGCCTCCCTCCAGGACCAGCACTGCGAGAGCCTG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 CTCCTTCTGGGGCTGAACCCCGTCTCTGCCTCCCTCCAGGACCAGCACTGCGAGAGCCTG 180

Qy        181 TCCCTGGCCAGCAACATCTCAGGACTGCAGTGCAACGCATCCGTGGACCTCATTGGCACC 240
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Db        181 TCCCTGGCCAGCAACATCTCAGGACTGCAGTGCAACGCATCCGTGGACCTCATTGGCACC 240

Qy        241 TGCTGGCCCCGCAGCCCTGCGGGGCAGCTAGTGGTTCGGCCCTGCCCTGCCTTTTTCTAT 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TGCTGGCCCCGCAGCCCTGCGGGGCAGCTAGTGGTTCGGCCCTGCCCTGCCTTTTTCTAT 300

Qy        301 GGTGTCCGCTACAATACCACAAACAATGGCTACCGGGAGTGCCTGGCCAATGGCAGCTGG 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 GGTGTCCGCTACAATACCACAAACAATGGCTACCGGGAGTGCCTGGCCAATGGCAGCTGG 360

Qy        361 GCCGCCCGCGTGAATTACTCCGAGTGCCAGGAGATCCTCAATGAGGAGAAAAAAAGCAAG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 GCCGCCCGCGTGAATTACTCCGAGTGCCAGGAGATCCTCAATGAGGAGAAAAAAAGCAAG 420

Qy        421 GTGCACTACCATGTCGCAGTCATCATCAACTACCTGGGCCACTGTATCTCCCTGGTGGCC 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 GTGCACTACCATGTCGCAGTCATCATCAACTACCTGGGCCACTGTATCTCCCTGGTGGCC 480

Qy        481 CTCCTGGTGGCCTTTGTCCTCTTTCTGCGGCTCAGGCCAGGCTGCACCCATTGGGGTGAC 540
              ||||||||||||||||||||||||||||||||
Db        481 CTCCTGGTGGCCTTTGTCCTCTTTCTGCGGCTC---------------------------- 513

Qy        541 CAGGCAGATGGAGCCCTGGAGGTGGGGGCTCCATGGAGTGGTGCCCCATTTCAGGTTCGA 600

Db        514 ------------------------------------------------------------ 513

Qy        601 AGGAGCATCCGGTGCCTGCGAAACATCATCCACTGGAACCTCATCTCCGCCTTCATCCTG 660
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        514 AGGAGCATCCGGTGCCTGCGAAACATCATCCACTGGAACCTCATCTCCGCCTTCATCCTG 573

Qy        661 CGCAACGCCACCTGGTTCGTGGTCCAGCTAACCATGAGCCCCGAGGTCCACCAGAGCAAC 720
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        574 CGCAACGCCACCTGGTTCGTGGTCCAGCTAACCATGAGCCCCGAGGTCCACCAGAGCAAC 633

Qy        721 GTGGGCTGGTGCAGGTTGGTGACAGCCGCCTACAACTACTTCCATGTGACCAACTTCTTC 780
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        634 GTGGGCTGGTGCAGGTTGGTGACAGCCGCCTACAACTACTTCCATGTGACCAACTTCTTC 693

Qy        781 TGGATGTTCGGCGAGGGCTGCTACCTGCACACAGCCATCGTGCTCACCTACTCCACTGAC 840
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        694 TGGATGTTCGGCGAGGGCTGCTACCTGCACACAGCCATCGTGCTCACCTACTCCACTGAC 753

Qy        841 CGGCTGCGCAAATGGATGTTCATCTGCATTGGCTGGGGTGTGCCCTTCCCCATCATTGTG 900
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        754 CGGCTGCGCAAATGGATGTTCATCTGCATTGGCTGGGGTGTGCCCTTCCCCATCATTGTG 813

Qy        901 GCCTGGGCCATTGGGAAGCTGTACTACGACAATGAGAAGTGCTGGTTTGGCAAAAGGCCT 960
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        814 GCCTGGGCCATTGGGAAGCTGTACTACGACAATGAGAAGTGCTGGTTTGGCAAAAGGCCT 873

Qy        961 GGGGTGTACACCGACTACATCTACCAGGGCCCCATGATCCTGGTCCTGCTGATCAATTTC 1020
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        874 GGGGTGTACACCGACTACATCTACCAGGGCCCCATGATCCTGGTCCTGCTGATCAATTTC 933
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Qy       1021 ATCTTCCTTTTCAACATCGTCCGCATCCTCATGACCAAGCTCCGGGCATCCACCACGTCT 1080
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        934 ATCTTCCTTTTCAACATCGTCCGCATCCTCATGACCAAGCTCCGGGCATCCACCACGTCT 993

Qy       1081 GAGACCATTCAGTACAGGAAGGCTGTGAAAGCCACTCTGGTGCTGCTGCCCCTCCTGGGC 1140
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        994 GAGACCATTCAGTACAGGAAGGCTGTGAAAGCCACTCTGGTGCTGCTGCCCCTCCTGGGC 1053

Qy       1141 ATCACCTACATGCTGTTCTTCGTCAATCCCGGGGAGGATGAGGTCTCCCGGGTCGTCTTC 1200
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1054 ATCACCTACATGCTGTTCTTCGTCAATCCCGGGGAGGATGAGGTCTCCCGGGTCGTCTTC 1113

Qy       1201 ATCTACTTCAACTCCTTCCTGGAATCCTTCCAGGGCTTCTTTGTGTCTGTGTTCTACTGT 1260
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1114 ATCTACTTCAACTCCTTCCTGGAATCCTTCCAGGGCTTCTTTGTGTCTGTGTTCTACTGT 1173

Qy       1261 TTCCTCAATAGTGAGGTCCGTTCTGCCATCCGGAAGAGGTGGCACCGGTGGCAGGACAAG 1320
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1174 TTCCTCAATAGTGAGGTCCGTTCTGCCATCCGGAAGAGGTGGCACCGGTGGCAGGACAAG 1233

Qy       1321 CACTCGATCCGTGCCCGAGTGGCCCGTGCCATGTCCATCCCCACCTCCCCAACCCGTGTC 1380
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1234 CACTCGATCCGTGCCCGAGTGGCCCGTGCCATGTCCATCCCCACCTCCCCAACCCGTGTC 1293

Qy       1381 AGCTTTCACAGCATCAAGCAGTCCACAGCAGTCTGAGCTGGCAGGTCATGGAGCAGCCCC 1440
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1294 AGCTTTCACAGCATCAAGCAGTCCACAGCAGTCTGAGCTGGCAGGTCATGGAGCAGCCCC 1353

Qy       1441 CAAAGAGCTGTGGCTGGGGGGGATGACGGCCAGGCTCCCTGACCACCCTGCCTGTGGAGGT 1500
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1354 CAAAGAGCTGTGGCTGGGGGGGATGACGGCCAGGCTCCCTGACCACCCTGCCTGTGGAGGT 1413

Qy       1501 GACCTGTTAGGTCTCATGCCCACTCCCCCAGGAGCAGCTGGCACTGACAGCCTGGGGGGG 1560
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1414 GACCTGTTAGGTCTCATGCCCACTCCCCCAGGAGCAGCTGGCACTGACAGCCTGGGGGGG 1473

Qy       1561 CCGCTCTCCCCCTGCAGCCGTG 1582
             |||||||||||||||||||||||
Db       1474 CCGCTCTCCCCCTGCAGCCGTG 1495
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In addition, claim 5 (80% nucleic acid identity with respect to SEQ ID NO: 14) and claim 6 (90% nucleic acid identity with respect to SEQ ID NO: 14), are encompassed by the claims of the '905 patent since SEQ ID NO: 1 (recited in the patented claims) has over 94% similarity with SEQ ID NO: 14 (recited in the instant claims). The instant claims are very broad, and recite the claimed CRF receptor protein

in terms of hybridization to the complement of the DNA encoding the protein, thus encompass the claims of the '905 patent.

Conclusion

Claims 1-2, 5-6, 8-11, 13-14 and 19 are rejected. Claim 7 contains allowable subject matter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Borgeest whose telephone number is 571-272-4482. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres, Ph.D. can be reached on 571-272-0867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Christina Borgeest, Ph.D.

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PRIMARY EXAMINER